

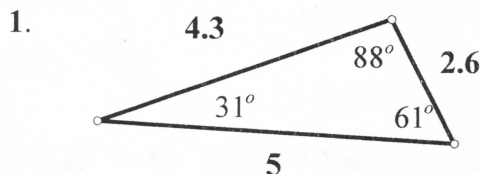
Unit 4 Worksheet 10 REVIEW PACKET

Directions: In the box provided next to each target section, put an (S) if you were able to complete the section by *yourSELF*, an (H) if you received a *minimal* amount of *HELP* from me, a classmate, or another source, or a (D) if you felt the section was *DIFFICULT* and required you to get *a lot* of help. This will help provide you by giving you feedback as to what topics you should be focusing on as you prepare for the test.

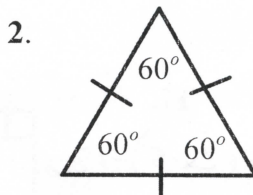


TARGET 4A

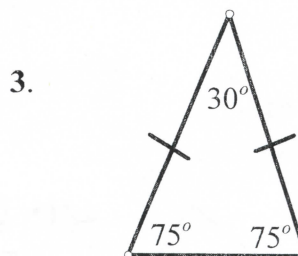
Classify each triangle by its sides and angles.



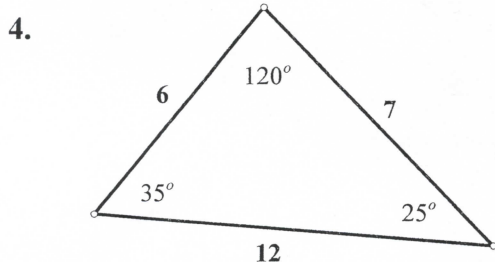
sides SCALENE
angles ACUTE



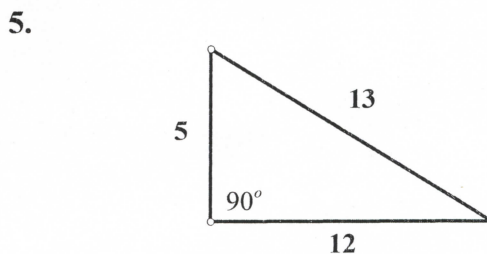
sides EQUILATERAL
angles EQUIANGULAR



sides ISOSCELES
angles ACUTE



sides SCALENE
angles OBTUSE



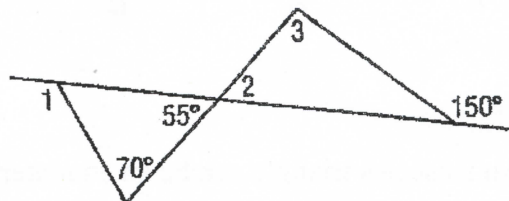
sides SCALENE
angles RIGHT



TARGET 4B

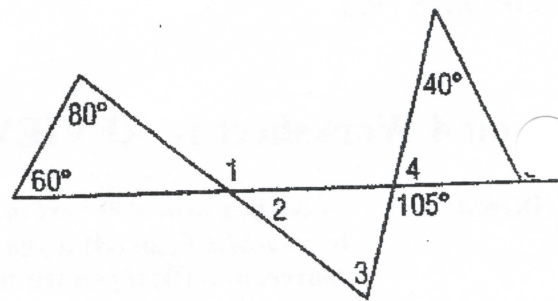
For #6-15, find the measure of the missing angle. Use the picture below for #6-8.

6. $m\angle 1 =$ 125°
7. $m\angle 2 =$ 55°
 $m\angle 3 =$ 95°



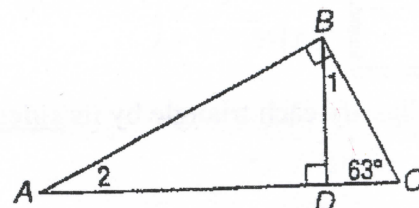
Use the picture at the right for #9-13.

9. $m\angle 1 = 140^\circ$ 10. $m\angle 2 = 40^\circ$
 11. $m\angle 3 = 65^\circ$ 12. $m\angle 4 = 75^\circ$
 13. $m\angle 5 = 115^\circ$



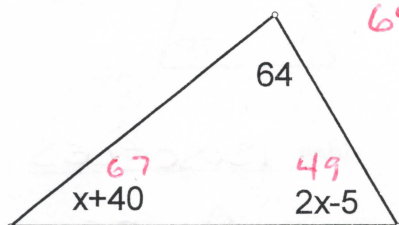
Use the picture at the right for #14-15.

14. $m\angle 1 = 27^\circ$ 15. $m\angle 2 = 27^\circ$



Solve for x for #16-17.

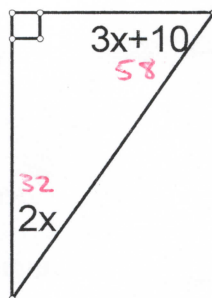
16.



$$\begin{aligned} 64 + (x+40) + (2x-5) &= 180 \\ 3x + 99 &= 180 \\ 3x &= 81 \\ x &= 27 \end{aligned}$$

$x = 27$

17.



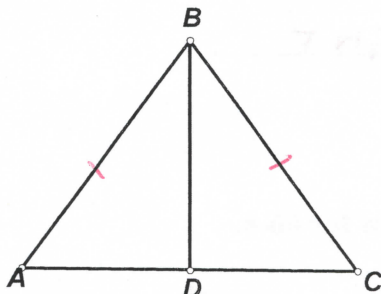
$$\begin{aligned} (3x+10) + 2x &= 90 \\ 5x + 10 &= 90 \\ 5x &= 80 \\ x &= 16 \end{aligned}$$

$x = 16$



TARGET 4C

18. Complete the following if $\triangle ABC$ is an isosceles triangle with $\overline{AB} \cong \overline{BC}$:



Name the legs of $\triangle ABC$ \overline{AB} , \overline{BC}

Name the vertex angle of $\triangle ABC$ $\angle ABC$

Name the base angles of $\triangle ABC$ $\angle A$, $\angle C$

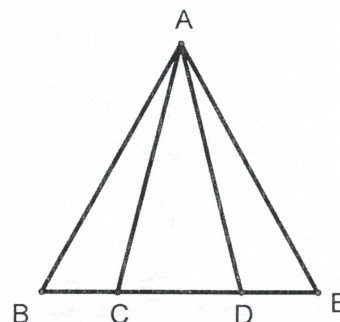
What do you know must be true of the base angles?

they are \cong

19. An isosceles triangle can be an equilateral triangle. True or False
 20. An equiangular triangle can be isosceles. True or False

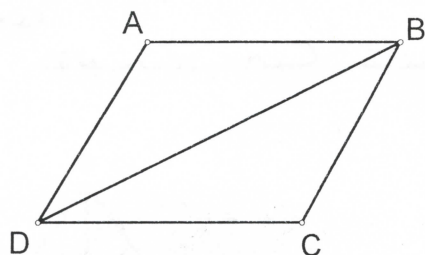
Name the corresponding sides or angles that must be congruent given the following. (HINT: If you are given sides – your answer should be angles and vice versa)

1. If $\overline{BA} \cong \overline{EA}$, then $\angle B \cong \angle E$
22. If $\overline{CA} \cong \overline{DA}$, then $\angle ACD \cong \angle ADC$
23. If $\angle B \cong \angle E$, then $\overline{AB} \cong \overline{AE}$
24. If $\angle ACD \cong \angle ADC$, then $\overline{AC} \cong \overline{AD}$



TARGETS 4D - 4G

25.

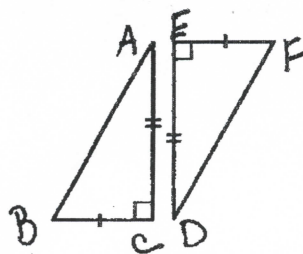


Which **angle** is included between \overline{AB} and \overline{BC} ? $\angle ABC$

Which **side** is included between $\angle C$ and $\angle BDC$? \overline{DC}

For numbers 9 – 12, determine which method the triangles are congruent by and then finish the congruence statement.

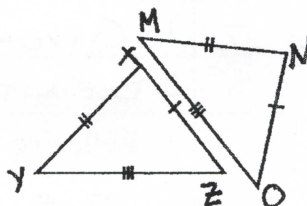
26.



SSS SAS ASA AAS HL

$$\triangle ABC \cong \triangle DFE$$

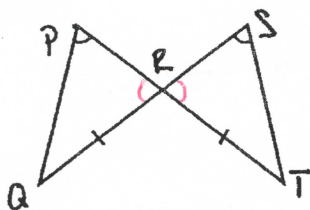
27.



SSS SAS ASA AAS HL

$$\triangle XYZ \cong \triangle NMO$$

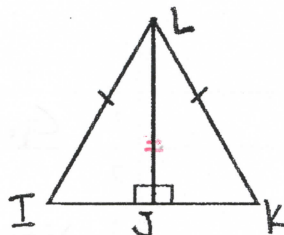
28.



SSS SAS ASA AAS HL

$$\triangle PRQ \cong \triangle SRT$$

29.

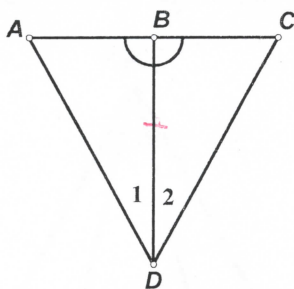


SSS SAS ASA AAS HL

$$\triangle IJL \cong \triangle KJL$$

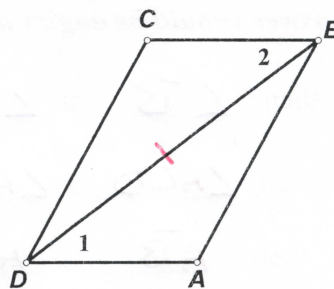
In order to use the postulate to prove the triangles congruent, what other piece of information do you need? (Note – do not state anything that can already be assumed from the picture!)

30.



ASA $\angle 1 \cong \angle 2$

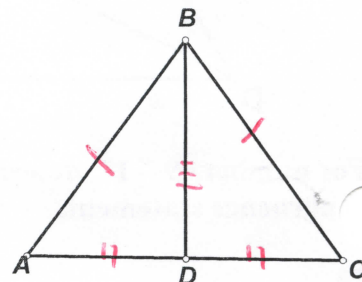
31.



(Given: $\angle 1 \cong \angle 2$) AAS $\angle A \cong \angle C$

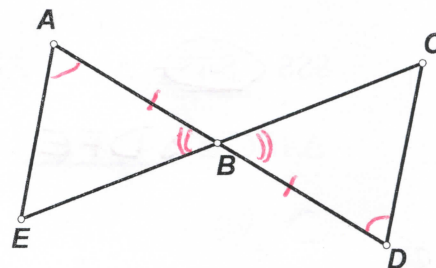
32. What does CPCTC stand for? CORRESPONDING PARTS OF CONGRUENT TRIANGLES ARE CONGRUENT
 What do you use it for? PROVING PARTS OF CONGRUENT TRIANGLES ARE CONGRUENT
 What must you do first before you use it? PROVE 2 TRIANGLES CONGRUENT

33. **Given:** $\overline{AB} \cong \overline{CB}$
 D is the midpoint of \overline{AC}
Prove: $\triangle ADB \cong \triangle CDB$



Statements	Reasons
1. <u>$\overline{AB} \cong \overline{CB}$</u> <u>D IS MIDPOINT OF \overline{AC}</u>	1. <u>GIVEN</u>
2. <u>$\overline{AD} \cong \overline{CD}$</u>	2. <u>DEFINITION OF A MIDPOINT</u>
3. <u>$\overline{BD} \cong \overline{BD}$</u>	3. <u>Reflexive</u>
4. <u>$\triangle ADB \cong \triangle CDB$</u>	4. <u>SSS</u>

34. **Given:** $\angle A \cong \angle D$
 $\overline{AB} \cong \overline{DB}$
Prove: $\overline{AE} \cong \overline{DC}$



Statements	Reasons
1. <u>$\angle A \cong \angle D$</u> <u>$\overline{BA} \cong \overline{DB}$</u>	1. <u>GIVEN</u>
2. <u>$\angle ABE \cong \angle DCB$</u>	2. <u>VERTICAL ANGLES</u>
3. <u>$\angle ABE \cong \angle DCB$</u>	3. <u>VERTICAL ANGLES</u>
4. <u>$\triangle ABE \cong \triangle DCB$</u>	4. <u>ASA</u>
5. <u>$\overline{AE} \cong \overline{DC}$</u>	5. <u>CPCTC</u>